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The personnel of the Long-Range Development Unit: (Standing, left to right), Sgt. J. H. Houghton, Flt. Lt. G. T. Gething,* Pilot Officer M. L. Gaine,* Sgt. H. B. Gray,* Sgt. T. D. Dixon,* Flt. Lt. B. K. Burnett,* Flt. Lt. R. G. Musson,* Flt. Lt. A. T. D. Sanders. (Sitting, left to right), Flt. Lt. A. N. Combe,* Sqn. Ldr. R. Kellett* (Flight Leader), Wing Cdr. O. R. Gayford, D.F.C., A.F.C. (Officer Commanding Long-Range Development Unit), Flt. Lt. H. A. V. Hogan,* Flt. Lt. P. H. Dunn. Asterisks denote those who took part in the actual flight.

and, apart from storms over the Indies, the crews experienced no discomfort.

Application will be made in due course to the F.A.I. for homologation of the record, the preliminary formalities required by the Federation for official observance of the departure and for the sealing of the airframes, engines, and petrol tanks having been made by the Royal Aero Club of Egypt on behalf of the Royal Aero Club of the United Kingdom.

After having stayed at Darwin for about four days the machines are to fly on to Sydney by way of Cloncurry.

The route taken was not a true Great Circle course, it being almost impossible to choose a Great Circle route to the east which does not involve flying over high mountains or enormous stretches of sea. The distance submitted to homologation was measured on the Great Circle. It was planned that from Ismailia the Wellesleys should steer a course as near as possible to the Great Circle route, passing through Port Darwin.

The actual route was by way of Jask, across India, passing just north of Hyderabad, across the Bay of Bengal, and, after picking up Port Blair, Andaman Islands, flying north-east of Singapore, thence across Borneo and the Timor Sea to Darwin. Further particulars are given in the radio log of the flight at the end of this report.

The Long-Range Development Unit

was officially formed in January, 1938, at Upper Heyford with a view to the further investigation of the Service problems associated with long-distance flying. Wing Cdr. O. R. Gayford, D.F.C., A.F.C., was placed in charge of the Unit in view of his previous experience, having made, in conjunction with Flt. Lt. Bett, the first non-stop flight from England to Egypt in October, 1931, and early in 1933 with Sqn. Ldr. (then Flight Lieutenant) G. E. Nicholletts, A.F.C., having broken the world's long-distance record on the same Fairey monoplane with a flight of 5,341 miles from Cranwell to Walvis Bay, South Africa. Since the date of formation of the Unit long-distance flying training has been carried on continuously. On July 7 this year four aircraft of the Unit completed a flight from Cranwell to Ismailia, via the Persian Gulf, of 4,300 miles in about 32 hours, returning to Upper Heyford on July 21 and leaving again for Ismailia on October 25, staying the night of the 24th at Malta.

At Ismailia there is a special runway in a north-west-south-east direction. This is 1,200 yd. long and 50 yd. wide, there being a concrete platform, 450ft. by 70ft., at the south-east end.

The special long-distance Wellesley differs from the standard machine in that it uses the Pegasus XXII engine, a Rotol airscrew, and is fitted with additional tankage in the wing. The forward part of the fuselage is slightly in-

creased in width, and use is made of a gilled long-chord cowling in conjunction with special fairings. Accommodation is provided for the use of the navigator. The all-up weight is approximately 19,000 lb., against the 11,000 lb. of the standard Service type. The wing, which, like the fuselage, is built on the Vickers-Wallis system of geodetic construction, has a very high aspect ratio. Main dimensions are: Span, 74ft. 7in.; length, 39ft. 3in.; and height, 12ft. 4in.

The portion of the fuselage between the front and rear cockpits (which have transparent hoods fitted with sunblinds) is occupied by a totally enclosed cabin. The pilot's seat is adjustable over a range of about 6in., and the whole seat is arranged to hinge backwards into the cabin so that the pilots may change positions, the machine being flown, of course, by the automatic pilot during the actual change-over. One member of the crew can sleep or rest in a bunk in the cabin while the others are on duty. The navigator is accommodated in the rear cockpit with the wireless and navigating instruments. There are side windows which fold up against the roof and do not cause a draught when they are wide open. Racks have been installed for the stowage of books, navigational equipment, and small items of personal property and clothing of the crews.

The machines are fitted with two-way wireless receiving and transmitting sets, two sextants for clerical readings,